

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/012514

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A01N47/24 A01N43/88 A01N43/54 A01N43/40 A01N37/50  
/(A01N47/24,61:00,59:16,43:828,43:653,37:44,37:42,37:40,37:36  
33:04,27:00),(A01N37/50,61:00,59:16,43:828,43:653,37:44,37:42,37:40

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97/40688 A (BASF AKTIENGESELLSCHAFT; MUELLER, BERND; SAUTER, HUBERT; AMMERMAN, EB) 6 November 1997 (1997-11-06)	1-3,9,10
Y	page 1 - page 7, line 5 page 11, line 36 - page 12, line 6 page 13, line 41 - page 14, line 9; examples 7,25 claims 1,2,5	11-17
X	----- TOMLIN C (ED): "The e-Pesticide Manual 2003 (Thirteenth Edition) Version 3.0" November 2003 (2003-11), BRITISH CROP PROTECTION COUNCIL, LONDON, GB; ENTRY "PYRACLOSTROBIN", XP002320397 ISSN: 0306-3941	1-3,9-13
Y	chapters "Application" and "other products" ----- -/-	11-13

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

8 March 2005

Date of mailing of the international search report

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JABS, T. ET AL: "Anti-oxidative and anti-senescence effects of the strobilurin pyraclostrobin in plants: A new strategy to cope with environmental stress in cereals" BCPC CONFERENCE--PESTS & DISEASES , (VOL. 2), 941-946 CODEN: BCDCAE, 2002, XP8044011	1-3,9, 11-17
Y	page 941, the abstracttable 1 page 945, paragraph 1 -----	14-17
A	WO 99/48370 A (BASF AKTIENGESELLSCHAFT; SCHELBERGER, KLAUS; GROTE, THOMAS; SAUTER, HU) 30 September 1999 (1999-09-30) page 1 - page 5, line 5 page 13, line 7 - line 42 page 18, line 34 - page 19, line 31 -----	1-4,9-17
A	US 2003/060371 A1 (ASRAR JAWED ET AL) 27 March 2003 (2003-03-27) paragraph [0022] - paragraph [0023] paragraph [0039] paragraph [0050] paragraph [0052]; claims 1,10,19,34 -----	1-4,9-17
A	US 6 369 090 B1 (SCHELBERGER KLAUS ET AL) 9 April 2002 (2002-04-09) column 1 - column 2, line 14 column 8, line 32 - line 43 column 11, line 65 - column 12, line 20; claims 1,2 -----	1-4,9-17
A	KOEHLER, H. ET AL: "Physiological effects of the new fungicide Juwel on yield in cereals" GESUNDE PFLANZEN , 49(8), 267-271 CODEN: GEPFAG; ISSN: 0367-4223, 1997, XP008044005 page 267. the abstract page 270, paragraph 2; figures 10-12 -----	1,2,9, 11-17
A	GROSSMANN, KLAUS ET AL: "Bioregulatory effects of the fungicidal strobilurin kresoxim-methyl in wheat (Triticum aestivum)" PESTICIDE SCIENCE , 50(1), 11-20 CODEN: PSSCBG; ISSN: 0031-613X, 1997, XP002320396 page 11, the abstract page 17, left-hand column, paragraph 2 - page 20 -----	1,2, 11-17
A	WO 96/00005 A (BASF AKTIENGESELLSCHAFT) 4 January 1996 (1996-01-04) page 1 - page 4, line 20 page 18, line 21 - page 20, line 13 -----	1,14-17

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 869 424 A (RADEMACHER ET AL) 9 February 1999 (1999-02-09) column 3, line 6 - column 4, line 65 -----	1,16,17

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International application No.  
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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4, and 9-17 (all partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, and 9-17 (all partially)

A mixture of strobilurin type fungicides of formula (I) and an ethylene modulator, which inhibits the conversion of S-adenosyl-L-methionine into 1-aminocyclopropane-1-carboxylic acid (ACC), and corresponding processes

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2. claims: 1-4, and 9-17 (all partially), 5, and 8 (all completely)

A mixture of strobilurin type fungicides of formula (I) and Co++ or Ni++ ions in plant available form as ethylene modulator, which block the conversion of ACC into ethylene, and corresponding processes

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3. claims: 1-3, and 9-17 (all partially)

A mixture of strobilurin type fungicides of formula (I) and phenolic scavengers such as n-propyl gallate as ethylene modulator, which block the conversion of ACC into ethylene, and corresponding processes

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4. claims: 1-3, and 9-17 (all partially)

A mixture of strobilurin type fungicides of formula (I) and polyamines such as putrescine, spermine or spermidine as ethylene modulator, which block the conversion of ACC into ethylene, and corresponding processes

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5. claims: 1-4, and 9-17 (all partially)

A mixture of strobilurin type fungicides of formula (I) and structural analogs of ACC, such as -aminoisobutyric acid or L-aminocyclopropene-1-carboxylic acid as ethylene modulator, which block the conversion of ACC into ethylene, and corresponding processes

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6. claims: 1-4, and 9-17 (all partially), 7 (completely)

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

6.1 A mixture of strobilurin type fungicides of formula (I) and salicylic acid or acibenzolar-S-methyl as ethylene modulator, which block the conversion of ACC into ethylene, and a process for controlling rust in legumes by applying said mixture,

6.2 a process for increasing yield and quality of legumes by applying said mixture,

6.3 a process for reducing ethylene evolution of plants by applying said mixture, and

6.4 a process for reducing undesired defoliation of crop plants by applying said mixture.

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7. claims: 1-4, and 9-17 (all partially), 6, and 8 (all completely)

A mixture of strobilurin type fungicides of formula (I) and structure analogs of ascorbic acid which act as inhibitors of ACC oxidase, such as prohexadione-Ca or trinexapac-ethyl as ethylene modulator, which block the conversion of ACC into ethylene, and corresponding processes

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8. claims: 1-3, and 9-17 (all partially)

8.1 A mixture of strobilurin type fungicides of formula (I) and triazoly compounds such as paclobutrazole or uniconazole, as inhibitors of cytochrome P-450-dependent monooxygenases whose main action is to block the biosynthesis of gibberellins, as ethylene modulator, which block the conversion of ACC into ethylene, and a process for controlling rust in legumes by applying said mixture

8.2 a process for increasing yield and quality of legumes by applying said mixture,

8.3 a process for reducing ethylene evolution of plants by applying said mixture, and

8.4 a process for reducing undesired defoliation of crop plants by applying said mixture.

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9. claims: 1-4, and 9-17 (all partially)

A mixture of strobilurin type fungicides of formula (I) and an ethylene modulator, which inhibits the action of ethylene, and corresponding processes.

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10. claim: 18 (completely)

A method for controlling harmful plant pathogens by applying an effective amount of  $\text{Co}^{++}$  ions in plant-available form.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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